HALF YEARLY EXAMINATION -2022

CLASS : 11TH STD   **MARKS : 70**

SUB   : CHEMISTRY (L.No : 2,3,4,5,6,8,10,12,13,14) TIME   : 3.00HRS

PART-I

CHOOSE THE CORRECT ANSWER   **15 X 1 = 15**

1.Q > KC this type of reaction is _____

   a) equilibrium state   b) formation of products

   c) formation of reactant   d) both a and c

2. Which one of the following is incorrect statement ?

 a) for a system at equilibrium, Q is always less than the equilibrium constant

 b) equilibrium can be attained from either side of the reaction

c) presence of catalyst affects both the forward reaction and reverse reaction to the same.

   extent

d) Equilibrium constant varied with temperature

3. According to Valence bond theory, a bond between two atoms is formed when

   a) fully filled atomic orbitals overlap   b) half filled atomic orbitals overlap

   c) non- bonding atomic orbitals overlap   d) empty atomic orbitals overlap

4.molecular geometry of SF_6 is _____

   a) octahedral   b) Square pyramidal   c) Square planar   d) pentagonal bi-pyramidal

5. Rate of diffusion of a gas is

 a) directly proportional to its density   b) directly proportional to its molecular weight

   c) directly proportional to its square root of its molecular weight

 d) inversely proportional to the square root of its molecular weight

6. The geometrical shape of carbocation

     (a) Linear   (b) Planar   (c) tetrahedral.   (d) Pyramidal

7. Which of the following is optically active

   a) 2 – methyl pentane   b) citric acid   c) Glycerol   d) none of of these

8. Benzene is treated with methyl chloride in the presence of anhydrous aluminium chloride

   _____ is formed

   a) chlorobenzene   b) tolune   c) acetophenone   d) cyclohexane

9. The raw material for Rasching process

    a) chloro benzene   b) phenol   c) benzene   d) anisole

10. Silverpropionate when refluxed with Bromine in carbontetrachloride gives

    a) propionic acid   b) chloro ethane   c) bromo ethane   d) chloro propane

11. Two electrons occupying the same orbital are distinguished

 a) azimuthal quantum number   b) spin quantum number

 c) magnetic quantum number   d) orbital quantum number

12. The element with positive electron gain enthalpy is

   a) Hydrogen   b) Sodium   c) Argon   d) Fluorine

13. Which one of the following is intramolecular hydrogen bond

  a) salicilaldehyde   b) o-nitro phenol   c) both a and b   d) H_2O

14. Tritium nucleus contains

  a) 1p + 0 n   b) 2 p + 1n   c) 1p + 2n   d) none of these

15. Lithium shows diagonal relationship with

 a) sodium   b) magnesium   c) calcium   d) aluminium

PART-II

ANSWER THE FOLLOWING ANY SIX QUESTIONS   **6 X 2 = 12**

NOTE : QUESTION NO : 24 IS COMPULSORY

16. State Heisenberg's uncertainty principle

17. what are isoeletronic ions? Give example

18. what is water gas shift reaction?

19. how is plaster of paris prepared?

20. write the charles law.

21. define reaction quotient

22. what is bond order?

23. What is electrometric effect?

24. A iron ball mass is 1 kg moving at 10 ms-1. calculate debroglie wave length ?

PART-III

ANSWER THE FOLLOWING ANY SIX QUESTIONS.   **6 X 3 = 18**

NOTE : QUESTION NO : 33 IS COMPULSORY

25. explain the hybridisation of methane?

26. Describe the aufbau's principle

27.explain the diagonal relationship

28.how to you convert para hydrogen into ortho hydrogen?

29.Derive ideal gas equation

30.Define lechatlier's principle

31.explain inductive effect with example

32.what is BHC ? Write its preparation?

33.How are the preparation of DDT?

PART-IV

ANSWER ALL THE QUESTIONS.   **5 X 5 = 25**

34.a) i)How many orbital are are possible for n=4 ?

ii) what is exchange energy?

(OR)

b) i) Derive ionic radius using pauling's method?

ii) define ionisation energy

35. a) i) write a note deuterium exchange reaction?

ii) explain covalent hydride. How are they classified?

(OR)

b) Discuss the similarities between beryllium and aluminium

36. a) Give the expression of critical constant by using vander vaals constant ?

(OR)

b) Derive relation between Kp and Kc

37. a) i) Discuss the formation of N_2 molecule using MO theory?

ii) Define hybridisation

(OR)

b) i) what is nucleohile and electrophile? With example

ii) write the beta elimination reaction?

38. a) what is polymerization? Explain the two types of polymerisation reaction of acetylene

(OR)

b) i) write the carbylamine reaction

ii) Write note on williamsons's synthesis.

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